

CLAIMS

1. A voltage converting device comprising:
an electric load (M1, M2, G1) having an electric power generating
5 function;
a capacitor (C2) connected to an input of said electric load (M1, M2,
G1);
a down-converter (12) down-converting a voltage of said capacitor
(C2);
10 control means (30, 30A, 30B) controlling said electric load (M1, M2,
G1) such that electric power generation in said electric load (M1, M2, G1) is
prohibited or an amount of electric power generated by electric load (M1,
M2, G1) is decreased, when said down-converter (12) fails.
- 15 2. The voltage converting device according to claim 1, wherein
said down-converter (12) has a voltage-up-converting function.
3. The voltage converting device according to claim 1 or claim 2
wherein
20 said electric load (M1, M2) is a motor having an electric power
generating function, and
said control means (30, 30A, 30B) restricts a regenerative electric
power generating function of said motor, when said down-converter (12)
fails.
- 25 4. The voltage converting device according to claim 3, wherein
said control means (30, 30A, 30B) prohibits regenerative electric
power generation of said motor.
- 30 5. The voltage converting device according to claim 3, further
comprising another electric load (M1) different from said motor, wherein
said control means (30A, 30B) restricts an amount of regenerative
electric power generated by said motor to a value smaller than power

consumption in said another electric load (M1).

6. A voltage converting device comprising:

5 a first electric load (G1, M2) having an electric power generating function;

a capacitor (C2) connected to an input of said first electric load (G1, M2);

10 a down-converter (12) down-converting a voltage of said capacitor (C2);

a second electric load (M1) different from said first electric load (G1, M2); and

15 control means (30A, 30B) controlling said second electric load (M1) such that an amount of power consumption in said second electric load (M1) is increased, when said down-converter (12) fails.

20 7. The voltage converting device according to claim 6, wherein said second electric load (M1) is a motor, and
said control means (30A, 30B) controls said motor such that it outputs positive torque.

25 8. A computer readable recording medium with a program recorded thereon for causing a computer to execute failure processing in a voltage converting device,

said voltage converting device including

an electric load (M1, M2, G1) having an electric power generating function,

a capacitor (C2) connected to an input of said electric load (M1, M2, G1), and

30 a down-converter (12) down-converting a voltage of said capacitor (C2), wherein

said program causes the computer to execute

a first step of detecting a failure in said down-converter (12), and

a second step of controlling said electric load (M1, M2, G1) such that

electric power generation in said electric load (M1, M2, G1) is prohibited or an amount of electric power generated by said electric load (M1, M2, G1) is decreased, when said failure in said down-converter (12) is detected at said first step.

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9. The computer readable recording medium with a program recorded thereon according to claim 8, wherein

 said electric load (M1, M2) is a motor having an electric power generating function, and

10 in said second step, a regenerative electric power generating function of said motor is restricted.

10. The computer readable recording medium with a program recorded thereon according to claim 9, wherein

15 in said second step, regenerative electric power generation of said motor is prohibited.

11. The computer readable recording medium with a program recorded thereon according to claim 9, wherein

20 said voltage converting device further includes another electric load (M1) different from said electric load (M2, G1), and

 in said second step of said program, an amount of regenerative electric power generated by said motor is restricted to a value smaller than power consumption in said another electric load (M1).

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12. A computer readable recording medium with a program recorded thereon for causing a computer to execute failure processing in a voltage converting device,

 said voltage converting device including

30 a first electric load (M2, G1) having an electric power generating function,

 a capacitor (C2) connected to an input of said electric load (M2, G1), a second electric load (M1) different from said first electric load (M2,

G1), and

a down-converter (12) down-converting a voltage of said capacitor (C2), wherein

5 said program causes the computer to execute
a first step of detecting a failure in said down-converter (12), and
a second step of increasing an amount of power consumption in said
second electric load (M1), when said failure in said down-converter (12) is
detected at said first step.

10 13. The computer readable recording medium with a program
recorded thereon according to claim 12, wherein

 said second electric load (M1) is a motor, and
 in said second step of said program, said motor is controlled such
that it outputs positive torque, when said failure in said down-converter
15 (12) is detected at said first step.

20 14. A failure processing method in a voltage converting device,
said voltage converting device including
an electric load (M1, M2, G1) having an electric power generating
function,

25 a capacitor (C2) connected to an input of said electric load (M1, M2,
G1), and

 a down-converter (12) down-converting a voltage of said capacitor
(C2),

30 said failure processing method comprising:
 a first step of detecting a failure in said down-converter (12); and
 a second step of controlling said electric load (M1, M2, G1) such that
electric power generation in said electric load (M1, M2, G1) is prohibited or
an amount of electric power generated by said electric load (M1, M2, G1) is
decreased, when said failure in said down-converter (12) is detected at said
first step.

15. The failure processing method according to claim 14, wherein

5 said electric load (M1, M2) is a motor having an electric power generating function, and

in said second step, a regenerative electric power generating function of said motor is restricted.

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16. The failure processing method according to claim 15, wherein in said second step, regenerative electric power generation of said motor is prohibited.

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17. The failure processing method according to claim 15, wherein said voltage converting device further includes another electric load (M1) different from said electric load (M2), and

15 in said second step of said failure processing method, an amount of regenerative electric power generated by said motor is restricted to a value smaller than power consumption in said another electric load (M1).

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18. A failure processing method in a voltage converting device, said voltage converting device including a first electric load (M2, G1) having an electric power generating function,

25 a capacitor (C2) connected to an input of said electric load (M2, G1), a second electric load (M1) different from said first electric load (M2, G1), and

a down-converter (12) down-converting a voltage of said capacitor (C2),

20 said failure processing method comprising:

a first step of detecting a failure in said down-converter (12); and

25 a second step of increasing an amount of power consumption in said second electric load (M1), when said failure in said down-converter (12) is detected at said first step.

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19. The failure processing method according to claim 18, wherein said second electric load (M1) is a motor, and

in said second step of said failure processing method, said motor is controlled such that it outputs positive torque, when said failure in said down-converter (12) is detected at said first step.